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14 ABSTRACT

As the 21st Century emerges, a changing environment, advances in technology and information accessibility, and cultural challenges will make the problems facing our future leaders more complex. This complexity, and the change associated with it, will make the requirement for leadership at the operational level paramount. This paper explores the nature of leadership. It describes the future challenges facing our military at the operational level and provides a basic understanding of the roles that critical thought, decision making, cultural empathy, and leadership development can have in meeting those challenges. Finally, the paper draws conclusions on the role of leadership in the future and provides recommendations for the military aimed at providing future operational leaders with the proper preparation to meet the challenges they will face.

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by

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Abstract

As the 21st Century emerges, a changing environment, advances in technology and information accessibility, and cultural challenges will make the problems facing our future leaders more complex. This complexity, and the change associated with it, will make the requirement for leadership at the operational level paramount. This paper explores the nature of leadership. It describes the future challenges facing our military at the operational level and provides a basic understanding of the roles that critical thought, decision making, cultural empathy, and leadership development can have in meeting those challenges. Finally, the paper draws conclusions on the role of leadership in the future and provides recommendations for the military aimed at providing future operational leaders with the proper preparation to meet the challenges they will face.

INTRODUCTION

September 11th, 2001 was more than a day of infamy for the United States. It was the day that everything changed, once again. It was a watershed event that welcomed the world to the 21st century. Not since December 7th, 1941 had the United States been attacked on its own soil. In both cases, one thing remained certain: things would never be the same. The lesson that our military can never forget is that the world is in a constant state of change, and the cost of forgetting that lesson is too significant in terms of the security of our nation.

That is where the concept of leadership finds its purpose. At its core, "leadership is about coping with change." In order to deal with the changing global environment, our military needs to embrace leadership and find ways to develop it in those officers who will be required to lead joint, combined, interagency, and multi-national efforts at the operational level in the future. As with anything else, there are several factors that must be considered when thinking about operational leadership in an uncertain future. Leaders will need to consider the operating environment, the nature of decision making, the impact of culture, and how to implement leadership development into service culture. In order for operational leaders to be successful in the 21st century, they must develop the vision to deal with complex problems in the execution of operations that support strategic and operational objectives in austere and challenging environments. For those reasons, the military needs to identify future leaders early and give them experience and education in order to develop the leadership, critical thinking, decision making, and cultural skills they will need to succeed.

BACKGROUND

What is leadership anyway? Warren Bennis, widely regarded as a pioneer of the field of Leadership Studies, argues that "leadership is the most studied and least understood topic of any in the social sciences." Through the years, an understanding of what leadership is has been elusive. Several theories have been developed, but none have really proven lasting. There have been several approaches to understanding leadership, each varying in their approach. Some looked at the leader and what made a certain type of person a great leader. Many argued that leaders were simply born and that leadership could not be taught. Others argued that essential leadership skills could be developed over time through education and experience. Some theories looked at followers and their interaction with the leader. Still, other theories looked at leadership as a situational phenomenon in which time and chance collided and the right person acting at the right time created results that left that person heralded as a great leader. "Like love, leadership continued to be something everyone knew existed but nobody could define. Many other theories of leadership have come and gone... None has stood the test of time."

Another question that is unavoidable when discussing leadership is, "what is the difference between leadership and management?" Nowhere is this question more blurry than in the business world. Consequently, the business profession has spent quite a bit of time looking at the difference between being a good manager and a good leader. A short and simple answer is that "managers are people who do things right and leaders are people who do the right thing." But that answer is too simplistic. In business, you need people who do things right. You need accountants to get the numbers right, you need quality control managers to ensure that assembly lines operate safely, and you need

supply chain managers who ensure things get delivered on time. When business is good, managers who know the standard operating procedures and best business practices will generally do just fine.

Leaders come into play when the standard ways of operating are no longer accomplishing your goals. "The classic business school definition of management was planning, organizing, directing, and controlling. The distinctions between 'leadership' and 'management' were blurred, and they were often used interchangeably. Not so today. Empowerment, vision, values, culture, quality, and service are the modern leadership currency. The rule of thumb is that the more things need to change, the more important leadership becomes." Leaders have the ability to look at things in a new way and to challenge assumptions in order to adapt to a new environment.

A key element in the success of any leader is their ability to formulate a vision. Vision keeps leaders from getting sidetracked by the minutiae involved in dealing with change. Great leaders have the ability to process copious amounts of information and find those critical pieces that will contribute to successfully achieving their vision. They are also able to communicate that vision to the entire organization in a way that influences a unified movement towards a common goal. This is where having a broad base of experience, education, and an open view of the world is helpful to leaders. It gives them the tools to develop critical thinking. It is critical thinking that allows leaders to challenge assumptions, to get out of the group think mindset and to develop alternatives. "When we think critically we become aware of the diversity of values, behaviors, social structures, and artistic forms in the world. Through realizing this diversity, our commitments to our own values, actions, and social structures are informed

by a sense of humility; we gain an awareness that others in the world have the same sense of certainty we do—but about ideas, values, and actions that are completely contrary to our own."

In the military profession, the concept of leadership has been studied for quite some time. Leadership in the military is much more than a desired commodity, it is an absolute requirement. While many leadership concepts are transferable between the business world and the military, the risks are astronomically higher in the military where the costs of failure are lives and national security. This holds true for the difference between leadership at the tactical level and the operational level. "At the operational level, the risks are much higher, and the tactical propensity to charge ahead may result in catastrophic defeat."

Milan Vego defines operational art as "a component of military art concerned with the theory and practice of planning, preparing, conducting, and sustaining campaigns and major operations aimed at accomplishing strategic or operational objectives in a given theater." Operational leaders in the military must have a profound understanding of their profession since they will be responsible for applying operational art to the complex problems the nation will face. "In the narrow understanding of the term, operational leadership refers to those levels of command responsible for accomplishing, through the application of operational art, strategic objectives assigned by the national or alliance/coalition leadership." It should be clear from this definition that the job description for operational leaders is intentionally broad. Quite simply, operational leaders will be called upon when all of the easy problems have been solved and all of the simple solutions to complex problems have been tried and failed. With this

understanding, it is clear that the qualifications for an operational leader are too numerous and varied to list. In this context, "the effective leader must be able to identify the forces of change, develop and articulate a vision which adapts to (or initiates) change, and then implement the chosen change strategy."

DISCUSSION/ANALYSIS

Central to the challenges facing operational leaders in the 21st century are profound changes in the operational environment, technological advances that dramatically increase access to massive amounts of information, and complex cultural dynamics. The operational leaders that face these challenges will need to be prepared in a way that textbooks and technical knowledge alone will not suffice. But, this is not a new phenomenon; it has been the challenge facing leaders throughout time. "Experience shows that overemphasis on technology at the expense of operational thinking cannot lead to success against a strong opponent who, though not having the most advanced weapons and equipment, has developed superior operational concepts."

A Defense Science Board study conducted in 2006 described the new operating environment of the 21st century by noting:

In less than two decades...the security environment facing the United States has changed from one dominated by a single adversary that had been studied for decades, to an environment with adversaries about whom little is known and whose actions are therefore less predictable...transnational terrorist, and/or loosely knit extremist organizations motivated by ideas and concepts alien to the American way of thinking, and embracing value structures that are difficult to understand. This lack of understanding hampers the nation's ability to take actions that influence or deter; to understand and predict the consequences [of those actions], both intended and unintended; and to act in ways consistently supportive of U. S. strategic objectives.¹²

It would be an understatement to say that the new operating environment is wrought with complexity; however, the success of our nation has been built upon our ability to adapt to new and changing environments. Of the attempts to write about the evolution of the operating environment from a military point of view, one of the most popular theories is that of fourth-generation warfare (4GW). "Fourth generation warfare uses all available networks—political, economic, social, and military—to convince the enemy's political decision makers that their strategic goals are either unachievable or too costly for the perceived benefit. It is an evolved form of insurgency." The follow on to fourth-generation warfare is fifth-generation warfare (5GW) which "will result from the continued shift of political and social loyalties to causes rather than nations. It will be marked by the increasing power of smaller and smaller entities and the explosion of biotechnology." Many 4GW and 5GW proponents argue that U. S. military capabilities are designed to operate within a nation-state framework and have difficulty operating outside that framework.

But, these theories tend to minimize the role of nation-states in current and future conflicts. In the ongoing Global War on Terror, the roles of states and alliances have been and will remain critical. They play a significant role in disrupting enemy networks, limiting enemy movement, and eliminating safe havens from which our adversaries can regroup, train, and recruit. They also play a significant role in providing access and some force requirements that are necessary to defeat the enemy. Dr. Antulio Echevarria, Director of Research at the Strategic Studies Institute, supports this and argues:

What we are really seeing in the war on terror, and the campaign in Iraq and elsewhere, is that the increased 'dispersion and democratization of technology, information, and finance' brought about by globalization has given terrorist groups greater mobility and access worldwide. At this

point, globalization seems to aid the non-state actor more than the state, but states still play a central role in the support or defeat of terrorist groups or insurgencies.¹⁶

He goes on to argue that many of the conventional conflicts of the past were fought along ideological lines and within a transnational framework of opposing global alliances, rather than the simple nation-state structure. ¹⁷

What remains relevant is the notion that the enemy is not hampered with the slow bureaucratic decision making process that our previous enemies have been. That gives them the ability to make decisions much more rapidly, and limits the time we have to observe them and process the intelligence we have prior to making a decision ourselves. In this high tempo environment, the temptation for operational leaders to rely too heavily on intuition to make the many rapid decisions often required of them is prevalent. In fact, many proponents of intuition-based decision making argue that intuition is derived from years of education and experience, and that it is a viable method that is well suited to the current complex environment.

However, the successes of intuitive choice are exaggerated and its risks are greatly underappreciated. ¹⁸ J. Edward Russo and Paul Schoemaker, two seasoned business advisers and world leaders in behavioral decision studies, argue that "professionals should rethink their roles. Their honed intuitive skills are crucial for framing questions, collecting evidence, and identifying the pertinent factors in a decision. But once the proper frame has been chosen and the right intelligence has been collected, the final choice calls principally for discipline in following the right rules." ¹⁹ The right rules in their opinion include a mix of intuitive and analytical processes that ultimately lead to better decisions. There are a number of techniques available to aid with this

process. But, to choose the right method to make a good decision requires a "consideration of the importance, complexity, and political or organizational ramifications of the decision at hand as well as time pressure, resource constraints, and issues related to justification." Obviously, the highest-quality decisions will be achieved with techniques that "are more time-consuming and costly, but yield greater accuracy and reliability in complex environments." The challenge is to find the right balance between time and risk.

Russo and Schoemaker declare that "well-intentioned, smart, experienced professionals make poor decisions far too often" because "they haven't been taught a disciplined process for making winning decisions."²² They propose a four stage decisionmaking process consisting of 1) framing the decision, 2) gathering intelligence, 3) coming to conclusions and 4) learning from experience. 23 They acknowledge that the process is more complex in real life, but argue that it helps to think about each of these activities of a decision separately. In the 21st century, information will be abundant due to advances in technology. This will require prudent operational leaders to utilize their broad experience and leadership skills to maximize their available time to formulate the best decision possible. "Successful leadership in complex, rapidly changing organizations depends on the ability to learn quickly from experience and apply experience-based knowledge to solving problems swiftly and effectively."²⁴ Intuition certainly plays a part in making good decisions, but it should only be a part. When it comes to operational leadership, the intuition that allows commanders to identify what information is critical to achieving their vision can certainly lead to better decisions by helping them frame decisions and come to conclusions more rapidly. But those decisions should be based on a well thought out, disciplined decision making process. The ability to make the best decisions is critical to operational leaders due to the amount of risk associated with their actions.

Another critical consideration for the 21st century is the impact of culture. Much has been written about the areas of the world in which the military will be most relevant in the future. There has been a significant emphasis on the littorals recently. There is good reason for it.

The importance of the world's oceans and seas to the economic well-being and security of all nations has perhaps never been greater than it is today. Approximately 80 percent of all countries border the sea, and nearly 95 percent of the world's population lives within 600 miles of it. About 60 percent of the politically significant urban areas around the world are located within some 60 miles of the coast, and 70 percent are within 300 miles. Approximately 40 percent of all the world's cities with populations of 500,000 or more are located on a coast. By 2025, it is projected 60 percent of the world's population will live in cities, most of which will be in littoral areas.²⁵

While many focus on the tactical implications of this phenomenon and look at it from a technical standpoint, the most significant notion is that no matter where the military operates in the future, it will inevitably involve a significant level of cultural interaction. Our forces will be operating in austere environments with unfamiliar language, social behaviors, and cultural norms.

Some would argue that technological advances will soon make it easier to communicate through automated language processors and that globalization has made the English language universal. Those arguments miss the mark and underestimate the importance of communication and the cultural aspects missing from a literal translation of language. For the operational leader, this is important on many levels because "…leadership is an essentially human business. The higher the rank, the more

interpersonal and human the undertaking."²⁶ A great deal of communication occurs from what is not said. Technology will not soon be able to capture the purely human elements of communication. In addition, good leaders "empower others to translate intention into reality and sustain it."²⁷ In order for that to occur, leaders have to be able to understand not just the meaning of words but the implications of language and gestures. This is not possible without a comprehensive understanding of many cultural aspects, not just language. "The management of meaning, mastery of communication, is inseparable from effective leadership."²⁸

Cultural interaction will occur within our own force, with multi-national coalitions and alliance partners, with the population and also with our enemies. It is an area that requires significant effort. From the perspective of the operational leader, perhaps the most significant skill that it requires is that of empathy. "No one is a leader who can't put himself or herself in the other person's shoes. Empathy and expertise command respect."²⁹ The impact of culture cannot be underestimated, and having the right skills to interact effectively is critical. "Empathy is particularly important today as a component of leadership for at least three reasons: the increasing use of teams; the rapid pace of globalization; and the growing need to retain talent."³⁰

These three reasons are particularly applicable to the military in the 21st century. Operational leaders will work closely with international political figures such as heads of state, ambassadors, and international organizations as members of a coalition or alliance and will need to be able to see things from their perspective. Cross-cultural communication is always challenging and presents many opportunities for misunderstandings. Empathy can help to prevent those misunderstandings or to resolve

them once they have occurred. While globalization appears to be aiding non-state actors more than state actors today, it has the potential to make it easier to operate with coalition and alliance partners provided that cultural understanding is at the forefront of our interactions. Finally, when it comes to retaining the talent that is desperately needed in the military, it is critical to understand the cultural challenges within our own nation that influence the choices of our junior leaders. This will allow operational leaders to become better mentors and to help develop the next generation of operational leaders.

CONCLUSIONS

From this analysis, it is clear that the primary challenges facing operational leaders in the 21st century involve understanding the operational environment, making rapid decisions with the aid of highly advanced technology and understanding complex cultural factors. How operational leaders deal with these challenges can be greatly enhanced by a dedicated effort by the military to properly prepare them. This is a challenging undertaking that requires time, planning, and the proper resources.

At the turn of the century, it is clear that an understanding of the new operational environment and how our enemies can manipulate it is pivotal for future operational leaders. "Today's adversaries have demonstrated agility that allows them to adapt in days or even hours. Their agility offers little time to observe what they do before they do it. Moreover, their tendency to hide their people, assets, and actions within the civilian population of countries in which they operate makes them even harder to counter" than our conventional adversaries of the past.³¹ While there has been much theoretical debate about this new operational environment, what is most important to remember is that an increased level of complexity has resulted from the impact of globalization coupled with

technological advances resulting in increased access and information. This complexity requires leaders who are ready to embrace change and formulate the vision required to effectively conduct operations in support of our nation's strategic and operational objectives.

Technology has advanced dramatically as the new century begins to take shape. While operational leaders should strive to know everything they can about both their own forces and those of their enemy, the amount of information that is made readily available by these technological advances has the potential to saturate the vision that is so critical to operational leaders. Warren Bennis argues:

All these forces and more contribute to the massive and growing complexity we see in today's world. This, in turn, creates great uncertainty and an overabundance of conflicting images in many organizations... All these things tend to cause organizational vertigo and lead to myopia. At the same time, they tend to make vision more imperative for the functional success of the organization, since without a coherent view of the future, these forces would conspire to shatter it in every direction. ³²

The vision of operational leaders of the future will be significantly challenged as they are forced to make many rapid, high risk decisions in the face of overwhelming information, increased complexity and inevitable change. "Thus, a new paradigm of contradictory demands emerges-the necessity to take quick and effective action against an agile, poorly defined enemy based on observables that are buried in all kinds of irrelevant and unrelated clutter and noise."

Possibly, the most critical challenge facing operational leaders in the future is that of culture. International borders are disappearing as globalization is rapidly bringing different cultures closer together than ever before. Failing to understand this phenomenon will most certainly lead to failure. For operational leaders, cultural

understanding is not optional. Their level of interaction with multinational coalition and alliance partners, with joint and interagency forces and with our enemies will demand that these leaders have a broad perspective of cultural considerations.

The tool that will help prepare future operational commanders is leadership. All of these considerations represent some form of change, and it is leadership that guides organizations through change. Operational leadership will be as necessary as it has ever been throughout history. A careful analysis of the challenges of the future tells us that "leaders are going to have to face one key challenge, and that is the need for flexible organizations that are able to merge the expertise of many different specialties rapidly..." The operational leaders of the future need to be prepared for this and it is up to the military to develop those leaders.

RECOMMENDATIONS

"Due to sophisticated technology, greater interdependence in the nature of organizational work, greater problem complexity, and a whole host of additional factors, organizations need leaders at all levels to deal with open and otherwise ill-structured problems. Leader development efforts can help in developing individuals who can handle this kind of complexity." The military needs to focus on streamlining its leadership development process. As the 21st century emerges, critical changes have occurred that dictate a renewed focus on developing leaders to meet the challenges ahead. It is now more critical than ever that the military properly manage and provide quality mentoring for those leaders it deems to have the potential to be the operational leaders of the future. This is driven largely by limited time and limited opportunity available to

provide the types of development required. To that end, the following recommendations are proposed:

1) Provide more opportunities to gain experience early. The best place for operational leaders to learn their craft is in combat, so effectively managing those personnel with future potential and getting them experience in combat is ideal. However, when that environment is not available, exercises or war games can serve as a substitute. The point is to get leaders engaged in the operational environment as early and as often as possible.

In order for these experiences to be most successful, the military needs to foster an environment in which leaders are not afraid to take risks or try new ideas. It has been widely acknowledged that failure is a part of the learning process. "For the successful leader, failure is a beginning, the springboard of hope... All learning involves some failure, something from which one can continue to learn." In order for experience to provide the greatest benefit, future leaders need to be given the opportunity to learn from their mistakes without the fear of career altering implications.

2) Require professional education for future operational leaders at an in-residence service college at both the junior and senior level. The military has been doing a good job of emphasizing the importance of joint education and experience in recent years. However, career implications have led many officers (particularly in the Navy) to forego the in-residence service college experience. Professional education at the service colleges emphasizes critical thinking, encourages healthy debate, and fosters creativity. These skills are valuable to future operational leaders as it helps them to develop vision and enhances their decision making process. It also provides a unique opportunity to

learn about the cultures of multi-national partners and the other services through direct interaction. This broadening experience is one that should not be missed by future operational leaders, and the investment is well worth the return. Furthermore, by mandating in residence attendance at the service colleges, those institutions could become the leadership development centers for the military, effectively managing a critical requirement for the future. "Institutionalizing a leadership-centered culture is the ultimate act of leadership."³⁷

3) Require career long study of foreign language and culture beginning at the college level and continuing through the junior and senior level service colleges. Leaders will require broader knowledge of other cultures and languages. A. Kenneth Pye, President of Southern Methodist University, argues that:

International studies is no longer just an important subject, it is an essential subject. Nobody should leave college without appreciating that global interdependency is a cardinal fact of life...In the 21st Century the United States will be one of many important players in the world, and we will need to interact closely on global issues. Understanding the multiplicity of worldwide cultures within this country will be increasingly important.³⁸

This is of paramount importance for operational leaders of the future. While there is no way to predict what languages or cultures will be most important in the future, the study of any language and culture broadens leaders perspectives on how to look at culture and the challenges that it presents. It will create a level of empathy that will be invaluable to our future operational leaders.

FINAL REMARKS

In the future, the requirement for exceptional leadership at the operational level will be paramount. A changing environment, advances in technology and information

accessibility, and cultural challenges will make the problems facing our future leaders more complex. It is in the best interest of the military to make the investment early to improve its emphasis on leadership development. "Leader development could enhance the cognitive and behavioral complexity of leaders, contributing to greater adaptability and self-awareness. Leader development efforts could increase individual emotional intelligence or the ability to learn from experience and result in enhanced tacit knowledge. Dialogue skills could be developed leading to better critical thinking." The results of this improved leadership development effort may not be immediately measurable. However, the investment will pay dividends by producing leaders who have worthwhile experience, a refined decision making process based on the ability to think both critically and creatively, and a cultural empathy that will prove invaluable as we move into an uncertain future.

These skills will form the foundation of the leadership that will be desperately needed to face the numerous changes in our global environment. "The successful leaders of the 21st Century will have to approach their lives and their organizations from a much more holistic standpoint, embracing within themselves a broad range of qualities, skills, and behaviors. As a result, leaders are going to have to drop the 'I've got it all together' image and become 'life-long learners.' They will be more reflective, constantly inviting feedback from peers and others in order to improve themselves and become more effective." Success in this endeavor is not optional; the cost of failure at the operational level of war is the blood and treasure of our nation.

END NOTES

http://www.au.af.mil/au/awc/awcgate/ssi/4gwmyths.pdf (accessed 13 March 2009).

¹ John P. Kotter, "What Leaders Really Do," in *The Leader's Companion: Insights on* Leadership Through the Ages, ed. J. Thomas Wren. (New York: Free Press, 1995), 115.

² Warren G. Bennis and Burt Nanus, *Leaders: The Strategies for Taking Charge* (New York: Harper & Row Publishers, 1985), 20.

³ Ibid., 5-6.

⁴ Ibid., 21.

⁵ Lynne Joy McFarland, Larry E. Senn, and John R. Childress, 21st Century Leadership (New York: The Leadership Press, 1994), 200-201.

⁶ Stephen D. Brookfield, "What It Means to Think Critically," in *The Leader's* Companion: Insights on Leadership Through the Ages, ed. J. Thomas Wren. (New York: Free Press, 1995), 381.

⁷ Milan N. Vego, *Joint Operational Warfare* (Newport, RI: Naval War College, 2007), X-9.

⁸ Ibid., I-4.

⁹ Ibid., X-5.

¹⁰ J. Thomas Wren, The Leader's Companion: Insights on Leadership Through the Ages (New York: Free Press, 1995), 375-376.

Vego, Joint Operational Warfare, XI-14.

¹² Under Secretary of Defense for Acquisition, Technology and Logistics, *Defense* Science Board 2006 Summer Study on 21st Century Strategic Technology Vectors, Volume II, Critical Capabilities and Enabling Technologies (Washington, DC: Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, February 2007), 23.

¹³ Thomas X. Hammes, "Fourth Generation Warfare Evolves, Fifth Emerges," *Military* Review, May-June 2007, 14, http://www.au.af.mil/au/awc/awcgate/milreview/hammes-4gw and-5th.pdf (accessed 6 April 2009).

¹⁴ Ibid., 23.

¹⁵ Antulio J. Echevarria II, Fourth-Generation War and Other Myths, (Carlisle, PA: Strategic Studies Institute, November 2005), 4-5.

¹⁶ Ibid., vi. ¹⁷ Ibid., 4.

¹⁸ J. Edward Russo and Paul J. H. Schoemaker, *Winning Decisions* (New York: Doubleday, 2002), 137.

¹⁹ Ibid., 158.

²⁰ Ibid., 153.

²¹ Ibid., 134.

²² Ibid., xii.

²³ Ibid., 6.

²⁴ Anna T. Cianciolo, John Antonakis, and Robert J. Sternberg, "Practical Intelligence and Leadership: Using Experience as a 'Mentor'," in Leader Development for Transforming Organizations: Growing Leaders for Tomorrow, ed. David V. Dav.

Stephen J. Zaccaro, and Stanley M. Halpin. (Mahwah, NJ: Lawrence Erlbaum Associates, Inc., 2004), 233.

- ²⁵ Chief of Naval Operations. *Maritime Operations at the Operational Level of War*, Navy Warfare Publication (NWP) 3-32 (Washington, DC: Department of the Navy. CNO, October 2008), 1-4.
- ²⁶ Bennis and Nanus, *Leaders*, 55-56.
- ²⁷ Bennis and Nanus, *Leaders*, 80.
- ²⁸ Bennis and Nanus, *Leaders*, 33.
- ²⁹ William G. Pagonis, "Leadership in a Combat Zone," in *Military Leadership: In* Pursuit of Excellence, ed. Robert L. Taylor and William E. Rosenbach. (Cambridge. MA: Westview Press, 2005), 72.
- ³⁰ Daniel Goleman, "What Makes a Leader?" in Military Leadership: In Pursuit of Excellence, ed. Robert L. Taylor and William E. Rosenbach. (Cambridge, MA: Westview Press, 2005), 64.
- ³¹ Under Secretary of Defense for Acquisition, Technology and Logistics, *Defense* Science Board 2006 Summer Study on 21st Century Strategic Technology Vectors, Volume II, Critical Capabilities and Enabling Technologies (Washington, DC: Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, February 2007), 24, http://www.acq.osd.mil/dsb/reports/2006-02-

Summer Study Strategic Tech Vectors Vol II Web.pdf (accessed 13 March 1009). ³² Bennis and Nanus, *Leaders*, 94.

- ³³ Under Secretary of Defense for Acquisition, Technology and Logistics, *Defense* Science Board 2006 Summer Study on 21st Century Strategic Technology Vectors, Volume II, Critical Capabilities and Enabling Technologies (Washington, DC: Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, February 2007), 24, http://www.acq.osd.mil/dsb/reports/2006-02-
- Summer Study Strategic Tech Vectors Vol II Web.pdf (accessed 13 March 1009).

 34 McFarland, Senn and Childress, 21st Century Leadership, 203.
- ³⁵ David V. Day and Stanley M. Halpin, "Growing Leaders for Tomorrow: An Introduction," in Leader Development, 8.
- ³⁶ Bennis and Nanus, *Leaders*, 71-75.
- ³⁷ Kotter, "What Leaders Really Do," 123.
- 38 McFarland, Senn and Childress, 21st Century Leadership, 287-288.
- ³⁹ David V. Day and Stanley M. Halpin, "Growing Leaders for Tomorrow: An Introduction," in *Leader Development*, 7.
- ⁴⁰ McFarland, Senn and Childress, 21st Century Leadership, 209.

SELECTED BIBLIOGRAPHY

- Bennis, Warren and Burt Nanus. *Leaders: The Strategies for Taking Charge*. New York: Harper & Row Publishers, 1985.
- Brookfield, Stephen D. "What It Means to Think Critically." In *The Leader's Companion: Insights on Leadership Through the Ages*, edited by J. Thomas Wren. New York: Free Press, 1995.
- Carter, Louis, David Ulrich, and Marshall Goldsmith. Best Practices in Leadership Development and Organization Change: How the Best Companies Ensure Meaningful Change and Sustainable Leadership. San Francisco: Pfeiffer, 2005.
- Cianciolo, Anna T., John Antonakis, and Robert J. Sternberg. "Practical Intelligence and Leadership: Using Experience as a 'Mentor'." In *Leader Development for Transforming Organizations: Growing Leaders for Tomorrow*, edited by David V. Day, Stephen J. Zaccaro and Stanley M. Halpin. Mahwah, NJ: Lawrence Erlbaum Associates, Inc., 2004.
- Day, David V., Stephen J. Zaccaro and Stanley M. Halpin. *Leader Development for Transforming Organizations: Growing Leaders for Tomorrow*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc., 2004.
- Echevarria, Antulio J. II. *Fourth-Generation War and Other Myths*. Carlisle, PA: Strategic Studies Institute, November 2005. http://www.au.af.mil/au/awc/awcgate/ssi/4gwmyths.pdf (accessed 13 March 2009).
- Goleman, Daniel. "What Makes a Leader?" In *Military Leadership: In Pursuit of Excellence*, edited by Robert L. Taylor and William E. Rosenbach. Cambridge, MA: Westview Press, 2005.
- Hammes, Thomas X. "Fourth Generation Warfare Evolves, Fifth Emerges." *Military Review*, May-June 2007, 14-23.

 http://www.au.af.mil/au/awc/awcgate/milreview/hammes-4gw_and-5th.pdf
 (accessed 6 April 2009).
- Kotter, John P. "What Leaders Really Do." In *The Leader's Companion: Insights on Leadership Through the Ages*, edited by J. Thomas Wren. New York: Free Press, 1995.
- McFarland, Lynne Joy, Larry E. Senn, and John R. Childress. *21st Century Leadership*. New York: The Leadership Press, 1994.
- Pagonis, William G. "Leadership in a Combat Zone." In Military Leadership: In Pursuit

- of Excellence, edited by Robert L. Taylor and William E. Rosenbach. Cambridge, MA: Westview Press, 2005.
- Russo, J. Edward and Paul J. H. Schoemaker. *Winning Decisions*. New York: Doubleday, 2002.
- Taylor, Robert L. and William E. Rosenbach. *Military Leadership: In Pursuit of Excellence*. Cambridge, MA: Westview Press, 2005.
- Under Secretary of Defense for Acquisition, Technology and Logistics. *Defense Science Board 2006 Summer Study on 21st Century Strategic Technology Vectors, Volume II, Critical Capabilities and Enabling Technologies.* Washington, DC: Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, February 2007. http://www.acq.osd.mil/dsb/reports/2006-02-Summer Study Strategic Tech Vectors Vol II Web.pdf (accessed 13 March 1009).
- U. S. Navy. Office of the Chief of Naval Operations. *Maritime Operations at the Operational Level of War*. Navy Warfare Publication (NWP) 3-32. Washington, DC: Department of the Navy, CNO, October 2008.
- Vego, Milan N. *Joint Operational Warfare: Theory and Practice*. Newport, RI: Naval War College, 2007.
- Wren, J. Thomas. *The Leader's Companion: Insights on Leadership Through the Ages*. New York: Free Press, 1995.